

Safety Hazard Brief

National Park Service
U.S. Department of the Interior
Inventory & Monitoring Program



Tornadoes

General Information

Tornadoes are nature's most violent storms. Spawned from powerful thunderstorms, tornadoes can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Every state is at some risk from this hazard. Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible. Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

Before the Storm

In preparation for a tornado, build an emergency kit and make a communications plan. Listen to the radio for weather updates or television newscasts for the latest information. In any emergency, always listen to the instructions given by local emergency management officials.

Be alert to changing weather conditions. Look for approaching storms. Look for the following danger signs:

- Dark, often greenish sky
- Large hail
- A large, dark, low-lying cloud (particularly if rotating)
- Loud roar, similar to a freight train.

If you see approaching storms or any of the danger signs, be prepared to take shelter immediately.

During the Storm

If you are under a tornado warning, seek shelter immediately! Most injuries associated with high winds are from flying debris, so remember to protect your head. If available, put on a bicycle or motorcycle helmet to protect yourself from head injuries.

If you are in a structure:

- Go to a pre-designated shelter area such as a safe room,



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basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest level (closet, interior hallway) away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck.

- In a high-rise building, go to a small interior room or hallway on the lowest floor possible.
- If available, put on a bicycle or motorcycle helmet to protect yourself from head injuries.
- Put on sturdy shoes.
- Do not open windows.

If you are in a vehicle:

Get out immediately and go to the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornadoes.

If you are outside with no shelter:

- Lie flat in a nearby ditch or depression and cover your head with your hands. Be aware of the potential for flooding.
- Do not get under an overpass or bridge. You are safer in a low, flat location.
- Never try to outrun a tornado in urban or congested areas in a car or truck. Instead, leave the vehicle immediately for safe shelter.
- Watch out for flying debris. Flying debris from tornadoes causes most fatalities and injuries.

After the Storm

Injury may result from the direct impact of a tornado or it may occur afterward when people walk among debris and enter damaged buildings. Because tornadoes often damage power lines, gas lines, or electrical systems, there is a risk of fire, electrocution, or an explosion. Protecting yourself requires promptly treating any injuries suffered during the storm and using extreme care to avoid further hazards.